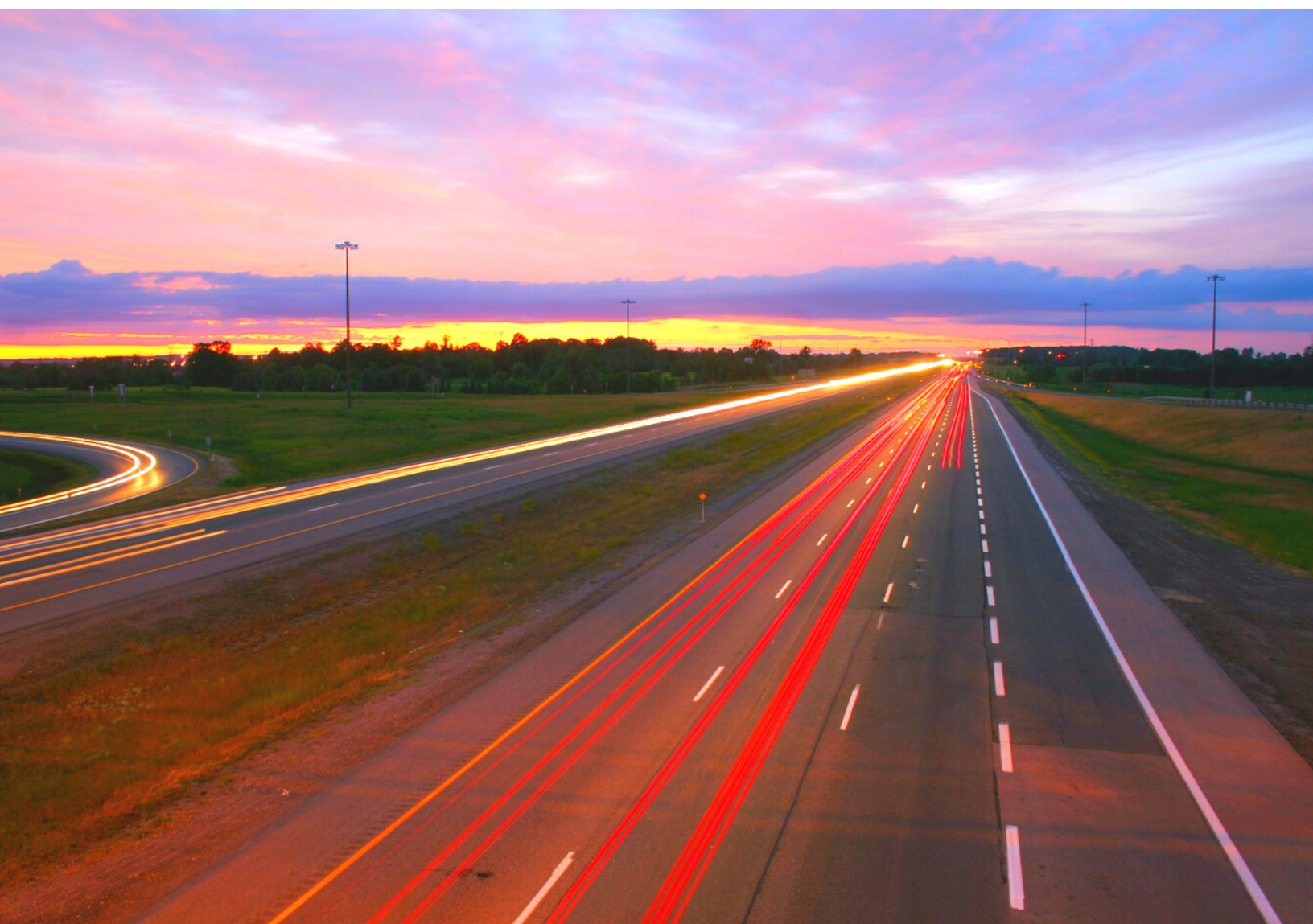


National Sleep Foundation's 2023 Drowsy Driving Survey

Risk Starts Early for Teen Drivers



November 2, 2023

National Sleep Foundation's Drowsy Driving Survey

2023 Key Results

Drowsy driving is a significant public health concern in the United States. Estimates suggest motor vehicle crashes related to drowsy driving account for roughly 20% of all motor vehicle crashes. Data from the AAA Foundation indicate that sleepiness is implicated in 21% of all motor vehicle crashes resulting in a death and 13% of motor vehicle crashes resulting in hospitalizations—totaling over 300,000 police-reported crashes, over 100,000 injuries, and as many as 6,400 deaths in the United States each year. Moreover, these data also showed that adolescents and emerging adults (individuals aged 16-24) accounted for approximately 20% of these drowsy driving crashes. In fact, motor vehicle crashes are the second leading cause of death among teenagers. The estimated impact of drowsy driving is similar to the estimated impact of other well-known causes of impaired driving, including drunk driving. As such, it's no surprise that drowsy driving is often called the “fourth D” among drunk, drugged, and distracted causes of impaired driving.

Given the striking public health impact of drowsy driving, and because it is preventable—often by ensuring people drive alert by getting enough of the quality sleep they need—the National Sleep Foundation has engaged in ongoing efforts since its founding in 1990 to educate the public about the dangers of drowsy driving and ways to help prevent it. Formally, the National Sleep Foundation developed and has produced Drowsy Driving Prevention Week[®] since 2007, with 2023 marking its 16th year as a national campaign. In 2016, the National Sleep Foundation published landmark consensus guidelines to establish a clear definition of when an individual is categorically too sleep deprived to operate a motor vehicle, along with defining quantifiable thresholds for sleep-related driving impairment. This consensus statement, endorsed by the AAA Foundation for Traffic Safety, American College of Chest Physicians, American College of Occupational and Environmental Medicine, and Society for Research on Biological Rhythms, affirmed that “drivers who have slept for two hours or less in the preceding 24 hours are not fit to operate a motor vehicle.” The consensus statement further noted that “most healthy drivers would likely be impaired with only 3 to 5 hours of sleep during the prior 24 hours.” This year, the National Sleep Foundation conducted a nationally representative survey to assess reasons for drowsy driving and attitudes toward the risks related to drowsy driving among American teens and adults. Results were alarming and suggested extensive opportunities for public education about both sleep health and driver safety.

Drowsy Driving Survey

In preparation for Drowsy Driving Prevention Week[®], the National Sleep Foundation conducted a survey among a random national sample of 1,124 teenagers age 13-17, Sept. 11-22, 2023 and among a random national sample of 1,349 adults, Sept. 13-24, 2023, including oversamples of Black and Hispanic adults. Results have a margin of sampling error of 4.1 points for the full teenage sample and have a margin of sampling error of 3.4 points for the full adult sample, including design effects. The survey was produced by Langer Research Associates of New York, with sampling and data collection via the probability-based SSRS Opinion Panel.

This report will focus on the survey results from teenagers. Due to a confluence of factors, including driving as a newly learned behavior and multiple competing time demands, teenagers find themselves at increased risks for drowsy driving and drowsy driving-related consequences. When appropriate, this report will compare teenage results to results obtained from the general adult population.

Prevalence and frequency of drowsy driving

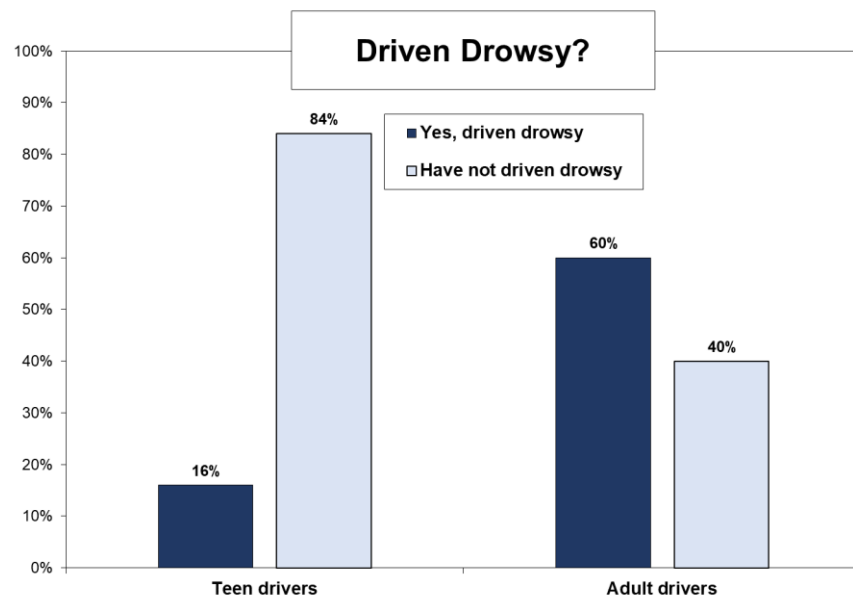
Approximately one in six (16%) teen drivers reported having driven drowsy. Extrapolated to the general teenage population, this represents approximately 1.7 million teenage drivers who had driven while so tired they had a hard time keeping their eyes open. Among all teen drivers, over 400,000 drive drowsy at least once per week. This represents a likely higher frequency of drowsy driving than observed in adults. However, these results need to be interpreted with caution due to the low sample size of teens who engage in drowsy driving.

The prevalence of teen drowsy driving was generally consistent across most subgroups. However, teen drivers who work for pay were more than twice as likely to have reported drowsy driving than teens who didn't work for pay (i.e., 25% of working teens reported that they've driven drowsy compared with

10% of non-working teens). Among American adults, 60% reported having ever driven drowsy with some differences among demographic groups. For example, 66% of men who drive reported having ever driven drowsy compared with 54% of women drivers, while 63% of employed drivers reported having ever driven drowsy, compared with 54% of drivers currently not working for pay.

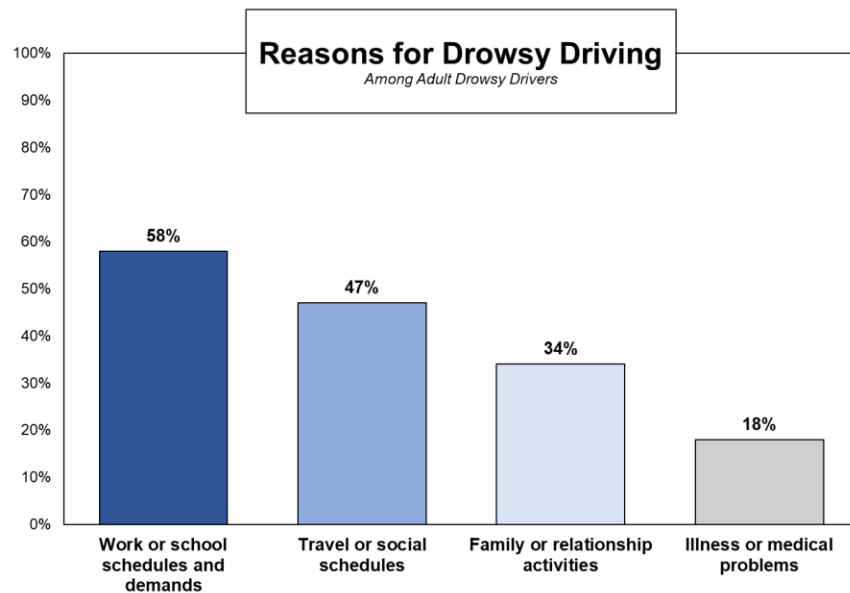
Reasons for drowsy driving

When asked about what prevented them from getting the sleep they needed to drive alert, the majority of teens pointed to work or school schedules, with lower rates for travel or social schedules and family or relationship activities as the main obstacles to driving alert.



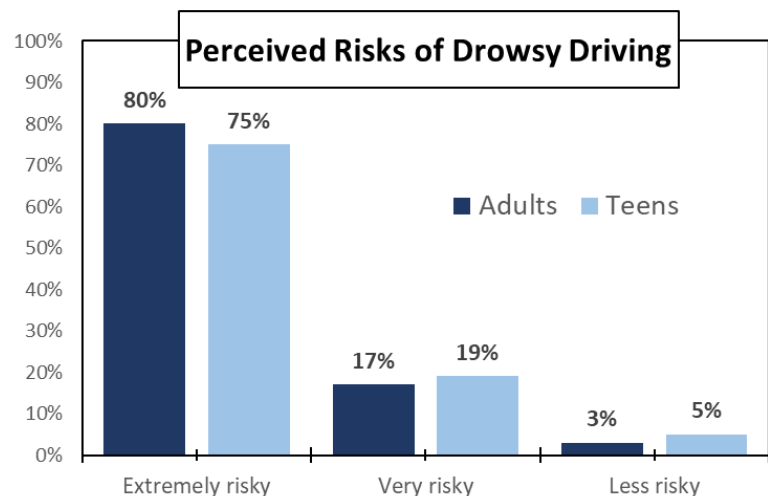
Of the adults who reported having driven while drowsy, 58% reported that work or school schedules prevented them from getting the sleep they needed to drive alert while 47% cited travel or social schedules, 34% cited family or relationship, and 18% reported illness or medical problems. For adults, these rates differed by income, with 53% of those annually making \$100,000 or more citing travel and social schedules compared to just 38% of those making less than \$50,000. Moreover, those making less than \$50,000 were significantly more likely to have reported illness or medical problems as the reason they are not getting the sleep they needed to drive alert. Differences

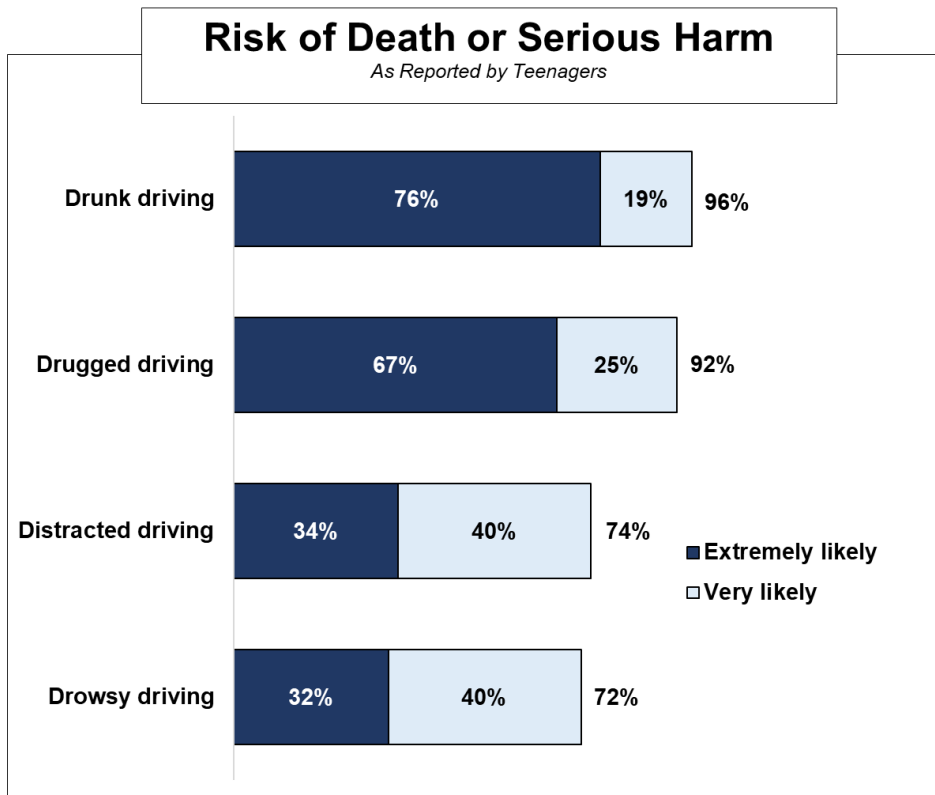
in race were also observed with 53% of White individuals pointing to travel and social schedules compared to just 28% of Black individuals and 34% of Hispanic individuals. On the other hand, 69% of Black individuals and 64% of Hispanic individuals cited work or school schedules, compared to 54% of White individuals.



Assessment of drowsy driving risks

When asked about the risks associated with drowsy driving, 95% of teens said drowsy driving is extremely or very risky, while 97% of adults reported drowsy driving was extremely or very risky. However, when asked about the likelihood of drunk, drugged, distracted, and drowsy driving leading to death or serious injury, drowsy driving was seen as having the lowest risk of death or serious harm by both teens and adults.





A separate measure of risk found greater alarm about drunk or drugged driving than distracted or drowsy driving. Ninety-six percent of teens said drunk driving is extremely or very likely to result in death or serious injury to the driver or others; 92 percent said the same about drugged driving. Those declined to 74 percent for distracted driving and 72 percent for drowsy driving. All are roughly similar to perceptions among adults.

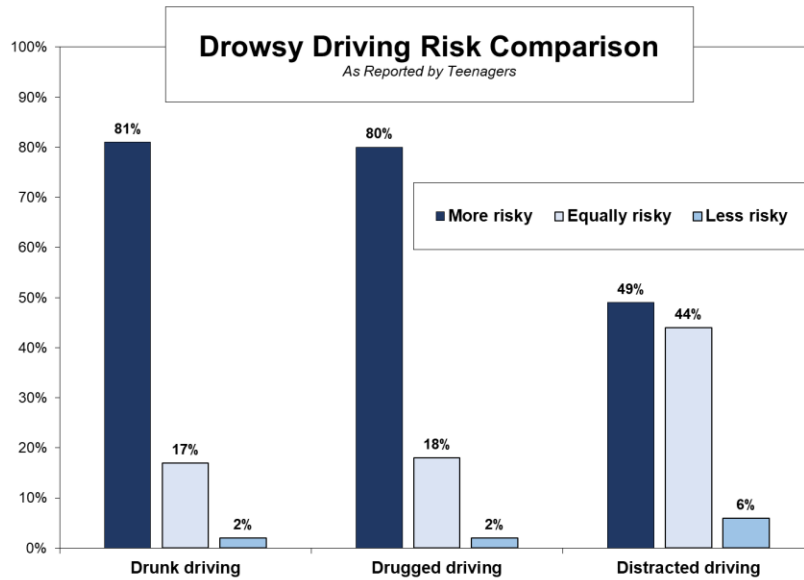
There was a difference in intensity of sentiment, with teens more likely than adults to see drunk or drugged driving as “extremely” likely to result in death or serious injury, a result that might mark an emphasis in driver training or public messaging on these two kinds of impairments.

Table 2 presents the percentages of teens and adults who reported the risk of death or serious harm is extremely likely. Specifically, 76% of teens said the risk of death or serious harm is extremely likely with drunk driving while only 32% said the risk is extremely likely with drowsy driving and 65% of adults said that drunk driving is extremely likely to lead to death or serious harm while just 31% said the same for drowsy driving.

Table 2. Percent (%) saying extremely likely to result in death or serious injury.

	Teens	Adults
Drunk driving	76%	65%
Drugged driving	67%	55%
Distracted driving	34%	32%
Drowsy driving	32%	31%

Risk assessment was generally consistent across groups. However, a notable exception was household income level and teen perception of drowsy driving risk. Teens in households with incomes less than \$50,000 were more apt than those in households with incomes of \$100,000 or more to have said each of the impairments was extremely likely to result in death or serious injury. In adults, only 25% of adults who have driven drowsy reported that it is extremely likely for drowsy driving to result in death or serious harm, compared to 37% of those who have never driven drowsy.



When asked about whether drunk, drugged, and distracted driving were more or less risky than drowsy driving, 81% of teens reported that drunk driving was more or much more risky than drowsy driving, while 80% say that drugged driving was more or much more risky than drowsy driving. Moreover, 67% of adults viewed drunk driving as more or much more risky than drowsy driving and 62% viewed

drugged driving as more or much more risky. Teens were significantly more likely to report that drunk and drugged driving is riskier than drowsy driving when compared with adults. Lastly, 44% of teens reported that distracted driving was equally risky as drowsy driving while 54% of adults viewed distracted driving as equally risky as drowsy driving. Table 3 presents the breakdown in percentages for both teens and adults.

Table 3. Percent (%) saying each item is much more or more risky than drowsy driving.

	Teens	Adults
Drunk driving	81%	67%
Drugged driving	80%	62%
Distracted driving	49%	40%

Conclusion

Drowsy driving is a serious public health concern that lies at the intersection of sleep health, public health, and safety. Drowsy driving is preventable if individuals get sleep of sufficient duration and quality. About one in six (16%) of teenage drivers and six in ten (60%) of adult drivers reported that they have ever driven drowsy, with most teens and adults pointing to work, school, and social schedules being the reason for why they did not get the sleep they needed to drive alert. Moreover, while the vast majority of teens and adults believed drowsy driving is risky, only about 30% of teens and adults believed that drowsy driving is extremely likely to lead to death or serious injury. The majority of teens and adults reported that drunk, drugged, and distracted forms of impaired driving were more risky than drowsy driving. There are currently laws against drunk, drugged, and distracted driving—with only two states in 2023, New Jersey and Arkansas, having active drowsy driving legislation. Legislative changes could elevate the importance of drowsy driving prevention and motivate drivers and passengers, if not serve as a deterrent. Given the preventable nature of drowsy driving and its potentially tragic consequences and impact on public health, meaningful efforts to educate teens and adults about healthy sleep and the risk of drowsy driving is needed, along with other interventions that range from adoption of driver assistance technologies in vehicles to policy change and enforcement.

The National Sleep Foundation is dedicated to improving the health and well-being of the public through sleep education and advocacy. Importantly, adults who are satisfied with their sleep were less likely than those who are dissatisfied with their sleep to report having driven drowsy. Drowsy driving prevention is everyone's responsibility. Sleep First. Drive Alert.TM Please visit theNSF.org for information regarding how anyone and everyone can be their Best Slept Self®.